

REMARKS

Initially, Applicant would like to express appreciation to the Examiner for the detailed Official Action provided, for the acknowledgment of Applicant's Claim for Priority and receipt of the certified copy of the priority document, and for the acknowledgment of Applicant's Information Disclosure Statement by return of the Form PTO-1449. Applicant also notes that the Examiner has not indicated that the drawings have been approved by the Official Draftsperson on a Form PTO-948. The Examiner is thus requested to indicate that Applicant's drawings are acceptable in the next Official Action.

Applicant acknowledges with appreciation the Examiner's indication of allowable subject matter in claim 4.

Upon entry of the above amendment, claims 1, 2, and 4 will have been amended and newly presented claim 8 will have been added. Accordingly, claims 1-8 are currently pending. Applicant respectfully requests reconsideration of the outstanding objection and rejections and allowance of claims 1-8 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

The Examiner has objected to claims 1, 2, and 4 for minor informalities. In particular, the Examiner has objected to the phrase "either one of in series and in parallel" of claim 1 as reciting improper Markush group language. The Examiner suggests amending claim 1 to recite "either one of in series or in parallel". However, it is respectfully submitted that the

phrase “either one of in series and in parallel” is proper. In this regard, Applicant notes that if elements constitute a proper Markush group, the members of the group “may be recited in the conventional manner, or alternatively. For example, if ‘wherein R is a material selected from the group consisting of A, B, C and D’ is a proper limitation, then ‘wherein R is A, B, C or D’ shall also be considered proper”. See MPEP 2173.05(h) Alternative Limitations I. MARKUSH GROUPS, paragraph seven. Accordingly, it is believed that the phrase “either one of in series and in parallel” is proper and Applicant respectfully requests reconsideration and withdrawal of the outstanding objection to claim 1.

Additionally, Applicant has amended claims 2 and 4 as suggested by the Examiner. Accordingly, in view of the above noted amendments and remarks, it is believed that the objection to claims 2 and 4 has been overcome, and Applicant respectfully requests reconsideration and withdrawal of the outstanding objection.

The Examiner has rejected claims 1-3, 5, and 7 under 35 U.S.C. § 102(b) as being anticipated by AOI et al. (WO 00/46865).

Although Applicant does not necessarily agree with the Examiner’s rejection of the claims on this ground, nevertheless, Applicant has amended independent claim 1 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicant notes that the AOI et al. document fails to show each and every element recited in the amended claim. In particular, claim 1, as amended, sets

forth a battery pack including, inter alia, “an electrical insulating plate for connecting surfaces of the secondary batteries where electrode terminals are provided and defining the predetermined spacing between the secondary batteries; and a case that stores the plurality of secondary batteries therein, the case having at least one strut extending therefrom in the predetermined spacing between the secondary batteries and spaced from the secondary batteries”. As shown in Figure 9, the AOI et al. battery pack includes a pair of batteries that are fixed together with substantially no space therebetween, an insulating tape 58, and connecting terminal plates 54, 57. Additionally, the AOI et al. device does not include a case having a strut extending therefrom. Therefore, the AOI et al. document does not show a battery pack including, inter alia, “an electrical insulating plate for connecting surfaces of the secondary batteries where electrode terminals are provided and defining the predetermined spacing between the secondary batteries; and a case that stores the plurality of secondary batteries therein, the case having at least one strut extending therefrom in the predetermined spacing between the secondary batteries and spaced from the secondary batteries”, as set forth in amended claim 1. Since the reference fails to show each and every element of the claimed device, the rejection of claim 1 under 35 U.S.C. § 102(b) over AOI et al. is improper and withdrawal thereof is respectfully requested.

The Examiner has rejected claims 1 and 5 under 35 U.S.C. § 102(b) as being anticipated by MABUCHI et al. (U.S. Patent No. 3,923,549); THIELE et al. (U.S. Patent No. 4,593,461); or VERDIER et al. (U.S. Patent No. 4,576,880).

Although Applicant does not necessarily agree with the Examiner's rejection of the claims on this ground, nevertheless, Applicant has amended independent claim 1 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicant notes that each of the MABUCHI et al., THIELE et al., and VERDIER et al. patents fails to show each and every element recited in the amended claim. In particular, claim 1, as amended, sets forth a battery pack including, inter alia, "an electrical insulating plate for connecting surfaces of the secondary batteries where electrode terminals are provided and defining the predetermined spacing between the secondary batteries; and a case that stores the plurality of secondary batteries therein, the case having at least one strut extending therefrom in the predetermined spacing between the secondary batteries and spaced from the secondary batteries".

The MABUCHI et al. battery pack includes a plurality of batteries that are fixed together with a separator 12 therebetween, a conductive connecting cap, and an insulating washer 10. A thermo-contractive resin 11 covers the battery pack. The MABUCHI et al. battery pack does not include a case having a strut extending therefrom between the batteries.

The THIELE et al. battery pack includes a plurality of batteries that are fixed together, conductive strips 26, nonconductive washer members 38, and a housing structure including partitioning walls 36 and 80. While in the THIELE et al. device the nonconductive washer members 38 define a space between the batteries, the partitioning walls 36, 80 are not positioned within the space defined by the nonconductive washer members 38. Further, as shown in figure 5, the partitioning walls 36 are not spaced from the batteries. While column 3, lines 30-41 describes the partitioning walls 36 as spaced to accommodate a *slight* variation in battery size, the partitioning walls also *align* and insulate the batteries, which requires at least some contact between the partitioning walls and the batteries. Therefore, the THIELE et al. battery pack does not include a case having a strut extending therefrom between the batteries and spaced from the batteries.

The VERDIER et al. battery pack includes a plurality of batteries 10, insulating washers 30, conductive elements 20, and a casing 100 having a partition 111 therein. However, while in the VERDIER et al. device, the insulating washers 30 define a space between the batteries, the partition 111 is not positioned in the space defined by the insulating washers.

Therefore, neither of the MABUCHI et al., THIELE et al., or VERDIER et al. patents shows a battery pack including, inter alia, “an electrical insulating plate for connecting surfaces of the secondary batteries where electrode terminals are provided and defining the

predetermined spacing between the secondary batteries; and a case that stores the plurality of secondary batteries therein, the case having at least one strut extending therefrom in the predetermined spacing between the secondary batteries and spaced from the secondary batteries”, as set forth in amended claim 1. Since each of the references fails to show each and every element of the claimed device, the rejections of claim 1 under 35 U.S.C. § 102(b) over MABUCHI et al., THIELE et al., or VERDIER et al. are improper and withdrawal thereof is respectfully requested.

Applicant submits that dependent claims 2, 3, 5, and 7, which are at least patentable due to their dependency from claim 1 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features.

The Examiner has rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over AOI et al. in view of CHEESEMAN (U.S. Patent No. 6,376,122). The Examiner takes the position that AOI et al. shows a battery pack but fails to show cells having a flat rectangular shape. The Examiner contends that it would have been obvious to substitute prismatic cells as taught by CHEESEMAN for the cylindrical cells of AOI et al. since both references are directed to battery packs housing secondary batteries.

Applicant notes that AOI et al. fails to teach or suggest the subject matter claimed, including, inter alia, “an electrical insulating plate for connecting surfaces of the secondary

batteries where electrode terminals are provided and defining the predetermined spacing between the secondary batteries; and a case that stores the plurality of secondary batteries therein, the case having at least one strut extending therefrom in the predetermined spacing between the secondary batteries and spaced from the secondary batteries”, as set forth in amended independent claim 1, as described above. Further, CHEESEMAN fails to cure these deficiencies. Moreover, there is nothing in the cited prior art that would lead one of ordinary skill in the art to make the modification suggested by the Examiner in the rejection of claim 6 under 35 U.S.C. § 103(a) over AOI et al. in view of CHEESEMAN. Thus, the only reason to combine the teachings of AOI et al. and CHEESEMAN results from a review of Applicant’s disclosure and the application of impermissible hindsight. Even if the teachings of AOI et al. and CHEESEMAN were combined, as suggested by the Examiner, the claimed combination would not result. Accordingly, the rejection of claim 6 under 35 U.S.C. § 103(a) over AOI et al. in view of CHEESEMAN is improper for all the above reasons and withdrawal thereof is respectfully requested.

Applicant submits that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicant’s invention as recited in newly submitted claim 8. Further, claim 4, which the Examiner has indicated contains allowable subject matter, has been rewritten in independent form as claim 8.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection and the rejections, and an early indication of the allowance of claims 1-8.

COMMENTS ON EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

In response to the Reasons for Allowance, Applicant wishes to clarify the record with respect to the basis for the patentability of claims in the present invention.

In this regard, while Applicant does not disagree with the Examiner's indication that (as noted by the Examiner) “[t]he prior art does not teach the battery pack construction of claim 4. Specifically, there is no motivation in Aoi et al. WO 00/46865 to modify the plurality of cells of the battery pack to reach the battery pack structure of claim 4. Adding a single cell to the end part of the plurality of batteries of Aoi and connecting the single cell to the rest of the batteries with an insulator would destroy the teachings of Aoi”, Applicant further wishes to make clear that the claims in the present application recite a combination of features, and that patentability of these claims is also based on the totality of the features recited therein, which define over the prior art.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is proper and that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicant's invention as recited in claims 1-8. The applied

references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

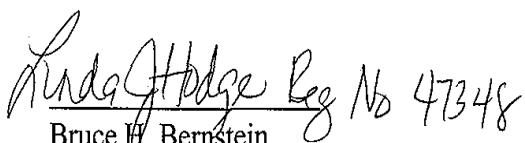
Accordingly, consideration of the present amendment, reconsideration of the outstanding Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicant has made a sincere effort to place the present application in condition for allowance and believe that he has now done so.

Applicant notes that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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